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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,354	08/22/2003	Daniel Studer	115-031628	8605

28289 7590 05/04/2006

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EXAMINER

PETERSON, KENNETH E

ART UNIT

PAPER NUMBER

3724

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/646,354

Applicant(s)

STUDER, DANIEL

Examiner

Kenneth E. Peterson

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 4-15 is/are pending in the application.
- 4a) Of the above claim(s) 5-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 13-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/207,284.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 23 Mar 06, 19 Mar 04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. Claim 1 is objected to because of the phrase "below about 1  $\mu\text{m}$ ". Due to the use of the term "about", this range has been interpreted to include 1  $\mu\text{m}$  itself. This, in turn, conflicts with "below", so Examiner recommends changing the phrase to "below or equal to about 1  $\mu\text{m}$ ".

2. The specification is objected to because it appears that the patent # 146199 mentioned on page 2 should be --156199--.

3. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites that the relative movement between the blade and probe is at a substantially constant speed during cutting. However, there are two motions occurring during cutting, one being the probe moving vertically, the other being the blade vibrating horizontally. The sum of these two motions does not appear to be "substantially constant" during cutting, and thus it is not clear how the claim scope should be interpreted. Perhaps Applicant should not have removed the reference to "the second direction".

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1,4 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman '326 in view of the German reference to Boettger (156199).

Goodman shows an ultramicrotome with a diamond blade (line 65, column 1) that cuts at thicknesses between 10nm and 100nm (line 31, column 1).

Goodman's blade does not vibrate in the manner claimed. However, Boettger shows that it is old and well known for microtome blades to vibrate in this manner, as discussed on page 3. It would have been obvious to one of ordinary skill in the art to have modified Goodman by adding the vibrating feature of Boettger to his blade block, in order to increase the knife's penetrating power.

Boettger discloses the amplitude of the vibration to be 0-30 microns (line 30, page 3), and thus has within it's range 1  $\mu$ m or below. Given the general conditions of Goodman and Boettger, it would have been obvious to experiment with the suggested variety of amplitudes (0-30 microns) to arrive at an acceptable one, such as about 1 $\mu$ m. The courts have long ruled that such experimentation is obvious. See In re Aller, 105 USPQ 233.

In regards to claim 15, Boettger teaches vibrating the blade at 30 KHz, which is above the recited 15 KHz or higher.

In regards to claim 4, Goodman's blade is ensconced in a block, and thus one of ordinary skill would have no choice but to apply the force to the block.

In regards to claim 14, as not understood, Goodman's blade and probe move at a relative speed that is "substantially constant" during cutting to an extent similar to Applicant's device.

6. Applicant's arguments with respect to claims have been considered but are largely moot in view of the amendments to the claims and the resultant new ground(s) of rejection.

Applicant's IDSs have now been accepted.

Applicant's new abstract has been accepted.

The 35 USC 112 rejections have been overcome, but a new one has arisen.

Applicant's arguments against Persidsky do not apply to the newly employed Boettger reference, since Boettger is clearly operating on a much smaller scale than Persidsky ever was.

Made of record but not relied on are patents to Sofue, Reinhard and Wolf showing pertinent vibrating blades.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

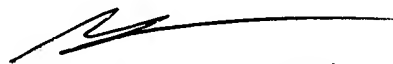
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ken Peterson whose telephone number is 571-272-4512. The examiner can normally be reached Mon-Thurs, 7:30AM-5PM

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on 571-272-4514. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KP  
April 17, 2006



KENNETH E. PETERSON  
PRIMARY EXAMINER